

Application Serial No. 09/721,141

REMARKS

The Applicant and the undersigned thank Examiner Irshadullah for the careful review of this application. The Applicant and the undersigned also appreciate the Examiner's time and consideration given during the telephonic interview conducted on December 17, 2002. The amendment to the current claims is a result of this telephonic interview.

Claims 40-49 have been rejected. Upon entry of this amendment, Claims 40-49 remain pending in this application. The independent claims are Claims 40, 43 and 44. Consideration of the present application is respectfully requested in light of the above amendments to the application and in view of the following remarks.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Information Disclosure Statement

Applicant submits the attached information disclosure statement (IDS) with the appropriate IDS processing fee for the Examiner's consideration. Copies of the references listed on the attached IDS are not being provided since they were cited in the parent application (U.S. App. Ser. No. 08/786,489 filed on January 21, 1997) and because the present application claims priority to this parent application. See 37 CFR § 1.98(d)(1)&(2). Consideration and an initialed copy of the attached IDS are respectfully requested.

Claim Rejections under 35 U.S.C. § 102(e) and § 103(a)

The Examiner rejected claims 40, and 43-48 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,893,074 to Hughes et al (hereinafter the "Hughes reference"). The Examiner also rejected claims 41, 42, and 49 under 35 U.S.C. § 103(a) as being unpatentable over the Hughes reference in view of U.S. Patent No. 5,406,476 to Deziel, Jr. et al (hereinafter the "Deziel reference"). The Applicant respectfully offer remarks to traverse these pending rejections.

Application Serial No. 09/721,141

Independent Claim 40

The rejection of Claim 40 is respectfully traversed. It is respectfully submitted that the Hughes and Deziel references fail to describe, teach, or suggest the recitations enumerated in amended independent Claim 40. These references fail to describe, teach, or suggest (1) a task comprising an amount of work, (2) each assignment comprising a portion of the work that corresponds with an individual resource; (3) associating each of the N assignments with one of said N resources, (4) each resource comprising one of a non-human and human object capable of performing an assignment; and (5) for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment. Further, these references do not provide any teaching of (6) generating a list comprising the N assignments, and (7) breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar.

While the Hughes et al. reference describes a schedule-control method that tracks tasks, these tasks comprise contracts between a supplier and a receiver. The contract results in the production of a "Product." Specifically, the Hughes et al. reference defines the contracts and products as follows:

"Each of these components work together to process input data in a special format that is defined herein as a "receivable/deliverable" (or "rec/del") format. Using the rec/del format, the method breaks down the project into a series of smaller components, referred to herein as "tasks". Each task involves a "contract" between a supplier and a receiver. The contract results in the production of a "product". Users can enter and access up-to-the-minute input data concerning a particular product or task from the rec/del system." [Emphasis Supplied.] See Hughes et al., column 2, lines 7-16.

"The schedule-control method includes several steps for receiving, processing, analyzing, computing and sending information for monitoring the status of the project. In a first step, suppliers or receivers enter the first set of input data to the method to identify the input and output products of their particular task. The first set of input data processed by the computer upon receipt are "bids". Bids are sent by suppliers and receivers over an electronic user interface and stored in the relational database of a computer." [Emphasis Supplied.] See Hughes et al., column 2, lines 17-25.

Application Serial No. 09/721,141

"The input data within a bid identify a particular product by: 1) naming the product; 2) associating a receiver's identification number (i.e., an account identification code) with the product; 3) associating a supplier's identification number with the product; 4) associating the receiver's required delivery date with the product; and, 5) associating the supplier's available delivery date with the product. These input data are provided for each product in the project. A contract is formed when both the supplier and receiver agree to the criteria used to define the product." [Emphasis Supplied.] See Hughes et al., column 2, lines 36-45.

"The input data within the bid are then analyzed by the computational component to determine the "state" of each product in the project. For example, the states of a product include "reconciled", "date not agreed", "product not agreed", or "no impact". If one party changes one of the criteria during the course of the project, the product's state is no longer in agreement. This change must be reviewed and accepted by the other party to complete a new contract." [Emphasis Supplied.] See Hughes et al., column 2, lines 46-53.

"The project 10 is broken down into a series of large-scale tasks 14a-14d. Each large-scale task is broken down into smaller tasks 15a-15d. Each task 14a-14d, 15a-15d results in a product. Products are designs, mechanical or electrical parts, tests, or reports. Each task is defined by a contract between at least two responsible parties, i.e., a receiver and supplier of the product." [Emphasis Supplied.] See Hughes et al., column 5, lines 9-15.

In light of the above recitations, one of ordinary skill in art recognizes that the schedule-control system 22 of the Hughes et al. reference does not describe tasks, assignments, or resources corresponding to assignments.

The Hughes reference illustrates in Figure 4 a printout of a computer screen 100 used in the schedule-control method to provide input data in a preferred received/delivered (rec/del) format. Bids containing input data are entered directly into the screen 100 and then sent to the computational component for processing. Data such as the product's due date 115 and received date 120 are provided. The computational component processes the due date 115 and received date 120 and returns a base line 122. The base line is the original agreed-to delivery for the product. See Hughes, column 10, lines 54-64.

Application Serial No. 09/721,141

Meanwhile, for each assignment of the present invention, the task, corresponding individual resource, and one of a portion of work corresponding to a respective resource and a duration of the assignment are identified. A list comprising the N assignments is generated, and these N assignments can be broken up into sub-assignments when a work-amount of each respective assignment exceeds a time-slot in a resource calendar. The Hughes reference does not mention any breaking up of assignments into sub-assignments since the Hughes reference does not address work, but rather, bids addressing contracts with delivery and received dates.

Also opposite to the present invention, the Deziel, Jr. et al. reference describes a system and method for scheduling activities that is focused on slack time, an amount of time an activity can be delayed without impacting a project's finish date. Specifically, the Deziel, Jr. et al. reference teaches the following about scheduling activities:

"The present invention is a method for quickly scheduling activities while preserving the probabilistic information about activity scheduling and taking resource constraints into consideration. An initial, deterministic, unconstrained schedule is first computed to allow an approximation to be made of each activity's slack time. (Slack time is the amount of time an activity can be delayed without impacting the project's finish date.) The rule for establishing the order in which activities are scheduled is made such that the activity with least available slack time should be scheduled before those with greater slack time." See Deziel, Jr. et al., column 2, lines 45-54.

While the Deziel, Jr. et al. reference may evaluate resources of an activity, the Deziel, Jr. et al. reference is not concerned with dividing a task or activity into assignments based upon the resources assigned to a task. Instead, the Deziel, Jr. et al. reference is concerned with the scheduling of a single activity that may be part of a group of activities:

"The resource constrained scheduling procedure of the present invention utilizes an iterative list processing approach to schedule the activities of the project. Activities are selected and scheduled one at a time from a list of schedulable activities. Exactly one activity is scheduled at each step. The priority rule for scheduling an activity is to select from the currently schedulable activities, the one which has the least total slack time from the deterministic schedule as defined above. However, it will be obvious to one skilled in the art that other priority scheduling rules may also be utilized." [Emphasis supplied.] See Deziel, Jr. et al., column 8, lines 34-44.

Application Serial No. 09/721,141

The Deziel reference does not mention any breaking up of assignments into sub-assignments as recited in amended independent Claim 1.

In light of these differences, one of ordinary skill in the art recognizes that the Hughes and Deziel references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 1. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Independent Claims 43 and 44

The rejections of Claim 43 and 44 is respectfully traversed. It is respectfully submitted that the Hughes and Deziel references fail to describe, teach, or suggest the recitations enumerated in amended independent Claims 43 and 44. These references fail to describe, teach, or suggest (1) a task comprising an amount of work, (2) each assignment comprising a portion of the work that corresponds with an individual resource; (3) associating each of the N assignments with one of said N resources, (4) each resource comprising one of an non-human and human object capable of performing an assignment; and (5) for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment. Further, these references do not provide any teaching of (6) generating a list comprising the N assignments, and (7) breaking up at least one of the assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar.

The Examiner may argue that the Hughes reference teaches "tasks" and that these "tasks" are broken down into "smaller tasks", one of ordinary skill in the art recognizes that the Hughes reference does not address breaking up assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in the resource calendar. As mentioned above, the Hughes reference describes a schedule-control method that tracks tasks where the tasks comprise contracts between a supplier and a receiver. The contract results in the production of a "Product."

Meanwhile, the Deziel reference has a focus that is activity-centered with an emphasis on the order of activities. The Deziel reference does not mention any breaking up of assignments or activities into sub-components.

Application Serial No. 09/721,141

Conversely, the present invention is focused on individual assignments that may make up a task and which can be broken up into sub-assignments as needed as recited in amended independent Claims 43 and 44 and mentioned on page 25, lines 34-37, of the originally filed application.

In light of these differences, one of ordinary skill in the art recognizes that the Hughes and Deziel references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claims 43 and 44. Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Dependent Claims 41-42, and 45-49

The Applicant respectfully submits that the above-identified dependent claims are allowable because the independent claims from which they depend are patentable over the cited references. The Applicant also respectfully submits that the recitations of these dependent claims are of patentable significance.

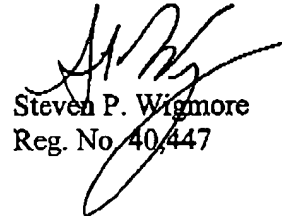
CONCLUSION

The foregoing is submitted as a full and complete response to the Office Action mailed on September 30, 2002. The Applicant and the undersigned thank Examiner Irshadullah for the consideration of these remarks. The Applicant has submitted remarks to traverse the rejections of Claims 40-49. The Applicant respectfully submits that the present application is in condition for allowance. Such Action is hereby courteously solicited.

Application Serial No. 09/721,141

If the Examiner believes that there are any issues that can be resolved by telephone conference, or that there are any formalities that can be corrected by an Examiner's Amendment, please contact the undersigned in the Atlanta Metropolitan Area at (404) 572-2884.

Respectfully submitted,



Steven P. Wigmore
Reg. No. 40,447

King & Spalding
191 Peachtree Street
Atlanta, Georgia 30303
404.572.4600
K&S Docket No.: 06576-105039

Application Serial No. 09/721,141

Version with markings to show changes made

40. (Once Amended) A method for generating a plurality of individually schedulable assignments for a task, based upon task constraints associated with said task, said task constraints identifying N resources assigned to said task where N is a positive integer, and a required work-amount corresponding to each of said N resources, comprising the steps of:

dividing said task into N assignments, said task comprising an amount of work, each assignment comprising a portion of the work that corresponds with an individual resource;

associating each of said N assignments with one of said N resources, each resource comprising one of an non-human and human object capable of performing an assignment;

for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment; [and]

generating a list comprising the N assignments; and

breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar.

41. (Once Amended) The method of claim 40, wherein said task constraints identify one or more scheduling constraints comprising one of task priority and assignment limit and further comprising the step of associating each of said N assignments with said scheduling constraints.

42. (Once Amended) The method of Claim 40, wherein said task constraints identify one or more scheduling constraints comprising one of task priority and assignment limit and further comprising the step of associating each of said N assignments with said task being divided.

Application Serial No. 09/721,141

43. (Once Amended) A computer-readable medium on which is stored a computer program for generating a plurality of schedulable assignments for a task, said program performing the steps comprising:

receiving a task description for said task, said task description identifying N resources assigned to said task where N is a positive integer, said task comprising an amount of work, a required work-amount corresponding to each of said N resources, and one or more scheduling constraints for said task;

dividing said task into N assignments, each of said N assignments identifying one of said N resources, each assignment comprising a portion of the work that corresponds with an individual resource, each resource comprising one of a non-human and human object capable of performing an assignment;

for each assignment, identifying the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment;

associating each of said N assignments with said scheduling constraints for said task; [and]

generating a list comprising the N assignments; and

breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar.

Application Serial No. 09/721,141

44. (Once Amended) A computer system for generating assignments for a task, comprising:

a processing unit;

a memory storage device;

a program module, stored in the memory storage device for providing instructions to the processing unit;

the processing unit, responsive to the instructions of the program module, operative to:

receive a task description for the task, the task description identifying N resources assigned to the task where N is a positive integer, said task comprising an amount of work;

divide the task into N assignments, each of the N assignments identifying one of the N resources, each assignment comprising a portion of the work that corresponds with an individual resource, each resource comprising one of a non-human and human object capable of performing an assignment;

for each assignment, identify the task, corresponding individual resource, and one of the portion of work corresponding to a respective resource and a duration of the assignment;

associate each of said N assignments with said scheduling constraints for said task; [and]

generate a list comprising the N assignments; and

breaking up at least one of the N assignments into sub-assignments when a work-amount of a respective assignment exceeds a time-slot in a resource calendar.